

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

1.-30. (Canceled)

31. (Currently Amended) A method of driving a solid image pickup device comprising a photoelectric conversion unit, a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals, a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit, and a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, said method comprising the steps of:

performing a primary transfer readout operation to transfer at least of transferring a part of the photoelectric charges accumulated in the photoelectric conversion unit ~~in a readout during a charge accumulation period~~, from the photoelectric conversion unit to the charge-voltage conversion unit; and

performing at least one other transfer readout operation, prior to a subsequent charge accumulation period, to transfer remaining of transferring the rest of the photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, wherein the photoelectric conversion unit is not reset prior to the at least one other transfer operation.

32. (Previously Presented) The method of driving a solid image pickup device according to claim 31, wherein output signals read out from the charge-voltage conversion unit from following the primary transfer readout operation and the at least one other transfer readout operation after the primary readout operation are retained, respectively, and added, and a resulting added output signals are summed output signal is outputted from a horizontal scan circuit to a common output line.

33. (Previously Presented) The method of driving a solid image pickup device according to claim 31, wherein after the primary transfer readout operation and before the at least one other transfer a readout operation after the primary readout operation, at least one intermediate readout operation is performed by resetting the charge-voltage conversion unit, transferring a part of the photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, and reading out an output signal signals amplified by the amplification means to a signal output line.

34. (Currently Amended) A solid image pickup device comprising:

- a photoelectric conversion unit;
- a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals;
- a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit; [[and]]
- a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit[[,]] ; and

wherein a control circuit for controlling the solid image pickup device to perform a primary transfer readout operation to transfer at least of transferring a part of the photoelectric charges accumulated in the photoelectric conversion unit in a readout during a charge accumulation period, from the photoelectric conversion unit to the charge-voltage conversion unit is performed, and to perform at a least one other transfer readout operation, prior to a subsequent charge accumulation period, to transfer remaining of transferring the rest of the photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, is performed and wherein the photoelectric conversion unit is not reset prior to the at least one other transfer operation.

35. (Previously Presented) The solid image pickup device according to claim 34, wherein the photoelectric conversion unit is an embedded-type photodiode.

36. (Previously Presented) An image pickup system comprising:
a solid image pickup device according to 34;
an optical system for focusing a ray of light to the solid image pickup device; and
a signal processing circuit for processing output signals from the solid image pickup device.

37. (Previously Presented) An image pickup system comprising:

a solid image pickup device according to 34;

an optical system for focusing a ray of light to the solid image pickup device;

a mechanical shutter for determining an exposure time of the solid image pickup device; and

a signal processing circuit for processing output signals from the solid image pickup device.